Application No. 09/678,783
May 31, 2005
Reply to office action of March 3, 2005

Amendments to the Claims

Please amend Claim 1 as follows:

1. (Currently Amended):   A method of determining a routing for packets in a network of network objects, said method comprising:

a)   dividing said network into ~~WAN (Wide Area Network) segments and~~ LAN (Local Area Network) segments of non-routing objects, and WAN (Wide Area Network) segments of routing objects;

b)   determining connections between non-routing objects, and between routing objects;

c)   determining a routing for packets through each segment based on connections determined in step b);

d)   combining said routing determined for each segment in step ~~b~~c) to obtain a total routing through the network.

2. (Cancelled): ~~A method as in claim 1 wherein step a) includes determining which network objects are routers and which network objects are non-routers.~~

3. (Currently amended):   A method as in claim ~~2~~1 further including partitioning non-router network objects into discrete LAN segments, each LAN segment being a collection of connected non-router network objects separated from other non-router network objects by at least one router.

4. (Currently amended):   A method as in claim ~~2~~1 including partitioning routers into WAN segments, each WAN segment being a collection of connected routers separated from other routers by at least one non-router network object.

2

Application No. 09/678,783
May 31, 2005
Reply to office action of March 3, 2005

5. (Currently Amended):   A method as in claim 4 wherein step b c) includes determining for each WAN segment a sequence of routers a packet passes through from a source router to a destination router in the WAN segment.

6. (Currently Amended):   A method as in claim 3 wherein step b c) includes determining for each segment which non-router network objects a packet passes through from a source non-router network object to a destination non-router network object in the LAN segment.

7. (Currently Amended):   A method as in claim 1 wherein step b c) is executed from a plurality of beacons located at different points in the network.

8. (Currently Amended):   A method as in claim 6 wherein step b c) includes reading a table of source addresses at each non-router network object in each LAN segment, said table containing source addresses of packets which transit through said non-router network object.

9. (Currently Amended):   A method as in claim 3 wherein step b c) is accomplished using a previously determined topology of the network.

10. (Original): A method as in claim 5 wherein the sequence of routers a packet passes through is determined from a plurality of beacons located at different points in the WAN segment.

11. (Original): A method of determining a packet's routing through a LAN segment composed of multiple network objects, said method comprising:
    a)   determining a network address of a source network object;
    b)   determining a network address of a destination network object;

3

Application No. 09/678,783
May 31, 2005
Reply to office action of March 3, 2005

     c)   determining which network objects receive packets from the source network object;

     d)   determining connections between network objects using the topology of the LAN segment; and

     e)   determining which network objects are in a route from the source network object to the destination network objects based on data obtained in steps c) and d).

     12. (Original): A method of determining the performance of a route in a network, the method comprising:

     a)   determining a source network object;

     b)   determining a destination network object;

     c)   determining a route through the network from the source network object to the destination network object;

     d)   measuring the network performance of each network object on the route; and

     e)   aggregating the network performances obtained in step d) to obtain a total network performance for the route.

     13. (Original): A method as in claim 12 wherein said network performance is that of a packet's delay through said network element and said total network performance for the route is the total end to end delay for a packet traversing said route.

     14. (Original): A method as in claim 12 wherein said network performance is that of a network element's drop rate of packets and said total network performance is the end to end transmission fraction over a path.

     15. (Original): A method as in claim 14 wherein said end to end transmission fraction over a path is determined according to

4

Application No. 09/678,783
May 31, 2005
Reply to office action of March 3, 2005

$$T = \prod_{i=1..N}(1-D(i))$$

where

T = end to end transmission fraction over a path from object 1-N

D(i) = drop rate of device i.

16. (Original): A method as in claim 12 wherein said network performance is a network element's throughput and said total network performance is a determination of bottlenecks in said path.

17. (Currently amended):   A method as in claim 21, further including steps:

a)   measuring a network performance of each segment on said routing; and

b)   aggregating said network performances obtained in step a) to obtain a total network performance for said total routing.

5